DEPARTMENT OF ECOLOGY

November 4, 1997

TO: Rule Advisory Committee

FROM: Pete Kmet
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SUBJECT: Ground Water Cleanup Standards

Ecology staff have reviewed the language pertaining to ground water cleanup standards in WAC 173-340-720 in response to the Policy advisory Committee recommendations. We believe the prudent course of action is to revise the rule language to clarify several areas of the current rule. While some of these changes *could* be addressed through guidance or policy statements, that approach would be inconsistent with recent executive directives. It also could result in inequities between those PLPs who are aware of the supplemental guidance and those who are not. This is especially likely for small businesses and consultants who do not routinely work on cleanups.

General Approach

We are still in the process of developing rule language. In general, our recommended approach is as follows:

Provide a framework in the MTCA regulations for developing cleanup standards for three types of ground water:

- Drinking water aquifers;
- Ground waters in hydraulic connection with undrinkable surface water; and
- Non-potable ground waters.

Drinking Water Aquifers

We propose to make some minor adjustments to the criteria for drinking water sources, to clarify the current rule language. Specifically, aquifers would be considered drinking water aquifers unless the following are demonstrated:

a. The ground water does not serve as a current source of drinking water
(current language)

AND

b. The ground water does not have a potential for being a future source of drinking water for either of two reasons:

- It cannot yield 0.5 gpm on a sustainable basis (current language modified)

OR

- The ground water natural water quality of sufficiently poor that it is not practicable to use as a source of drinking water. The 10,000 ppm TDS standard would remain as a presumption for having met this criterion (current language).

c. A demonstration is made that the contaminated ground water will not contaminate a drinking water aquifer (current language).

The standard for drinking water aquifers is proposed to remain the current Table A or Method B (ARARs & formulas). Method C would be eliminated as an option for these aquifers.

In addition, an upper limit of 50% of the solubility limit would be imposed on any formula calculated standards to ensure no free product or precipitate would be present in the ground water.

Ground Water Near Certain Surface Waters

For ground water near surface water, we propose to clarify the "extremely low probability" test by stating that to meet this standard, the ground water must be sufficiently hydraulically connected to an undrinkable surface water so that the ground water could not be used without treatment because of the surface water quality. We believe this is consistent with current use of this provision and that sites near marine waters are more likely to qualify for this classification.

The cleanup level for these ground waters would be the surface water standards (most likely, marine water quality standards), applied to the ground water.

To use this alternative, we propose to modify the conditions to include the following:

- A demonstration that the potentially affected area is currently served by a public water system.
- Notification of the local water purveyor and local governments and an opportunity provided for submittal of information indicating the use of the

ground water as a source of drinking water is not an "extremely low probability" or information on other planned uses of the ground water.
- Individual notification of any potentially affected property owners and provision for submittal of the same information.

The other current rule provisions requiring institutional controls and other demonstrations would remain intact.

Non-Potable Ground Water

For non-potable ground water, we propose to replace the current "case-by-case" language with more specific rule language on how to establish cleanup levels.

To establish cleanup levels for non-potable ground water at levels less stringent than drinking water, we propose the following conditions:

- Definition of the extent of contamination and site hydrogeology so the potential ultimate extent of the contamination is defined.
- A demonstration that the potentially affected area is currently served by a public water system.
- Notification of the local water purveyor and local governments and an opportunity provided for submittal of information on whether the ground water is potable and information on other planned uses of the ground water.
- Individual notification of any potentially affected property owners and provision for submittal of the same information.
- Institutional controls are established.
- A demonstration that other drinkable aquifers are not likely to be affected (similar to current language in other sections).

There would be several options for cleanup levels for these aquifers:

- Use the same cleanup level as that for a drinking water aquifer.
- Use a surface water standard as the ground water cleanup level.
- Develop a site-specific cleanup level using a site-specific risk assessment.

Potential pathways that would need to be considered in a site-specific risk assessment would be identified in the rule. In addition, while no specific formulas would be identified in the rule, the following constraints are proposed for the risk assessment:

- Hazard index of 1.0
- Total carcinogenic risk of 1 in 1 million.
- Not to exceed 50% of the solubility limit
- No adverse impacts on private or public utilities (such as water or sewer lines).

Point of Compliance

The starting point for all sites (drinking water, near surface water, non-potable) would remain “throughout the site”.

We are still working on language to implement the PAC recommendation on conditional points of compliance for sites near surface water and area-wide brownfields.

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